encircling ridge is broken up into tubercles, which gives to the tooth a striking likeness to those of *Ornithorhynchus.* Other genera have teeth like those of many Ungulates. It has been shown by Sir J. Tomes[1] that the minute structure of the enamel differs in different groups of Rodents.

The skull shows certain primitive characters. In the first place there is no distinction between the orbital and the temporal fossa.[2] The sutures between the bones retain their distinctness for very long. Other characteristic features are the following:----------
The nasals are large, and so are the paroccipital processes. The palate in front of the molars is not distinct- from the sides of the skull, its edge gradually becoming rounded off above. It is also very narrow. The .premaxillae are large in relation to the great incisors. There is often a very much enlarged infra-orbital foramen through which passes a part of the masseter muscle. The jugal bone lies in the middle of the zygomatic arch, which is complete and enormously enlarged in the Spotted Cavy *(jCoelof/enys pac<z).* As in many Marsupials, the jugal bone sometimes extends back-wards to the glenoid cavity, where the lower jaw articulates. It is usually said with an absolute want of accuracy that the cerebral hemispheres of the Rodents are smooth and without convolutions.
This error has been, repeated again and again in text-books. As a matter of fact the cerebral hemispheres of many forms are quite well convoluted,[3] the degree of furrowing corresponding, as in so many groups of mammals, with the size of the animal. This at any rate is generally true, though the large Beaver with its scant convolutions is an exception. The smaller forms., such as *M^us*$_f$ *Sciurus, Dipus,* and *Cricetus* are quite smooth-brained. The best furrowed brain of any Rodent which has been examined is that of the huge *Hydrochoerus.* The Sylvian fissure is very generally not pronounced ; but is particularly -well-marked in *Lagostonvus.*
In all, or in most, Rodents the hemispheres are separated by an interval from the cerebellum, the optic lobes being visible between the two.

The mouth cavity of this group of mammals is divided into

two chambers by a hairy ingrowth behind the incisors; this arrangement is useful for animals which use their strong incisors

[1] ***Phil. Trans.*** **1850, pt. ii. p. 529,** [s] **Seen, however, in** ***Cha*tomy$.***

*** See Beddard, JPr<w. *&v<rl. jSoc.* 1892, p, 596, and Gervals,** ***Jbum. Zvol.*** **L 1872, p. 450.**